



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

of its constituents probably facilitates the absorption of gases and metabolism generally, to an extent hitherto unnoticed. On the rôle of the latex the author promises further publication.

Because the mucilage tubes of the Liliaceae, Amaryllidaceae, and Commelynaceae are analogous to the latex tubes, Molisch has investigated them. He finds extraordinary nuclei in some of them—filaments 1500μ long by $0.1-0.3\mu$ in diameter; also proteid crystalloids, starch, glucose, and tannins, as in latex tubes, besides a new body, luteofilin, which occurs as sphere crystals in the mucilage of many monocots.—C. R. B.

A manual of bacteriology.

IN 1897, Frederick D. Chester published in the *Annual Report* of the Delaware Agriculture Experiment Station a preliminary arrangement of the species of the genus *Bacterium*. This work, rearranged and enlarged to include all the groups of bacteria, has now appeared in a valuable *Manual of determinative bacteriology*.² While not so voluminous as Migula's great work on systematic bacteriology, this book is by far the most complete classification in English, comprising descriptions of some 780 forms. The system of classification adopted, by means of which related forms may be readily traced out or new species identified, is the same as that first proposed by Migula in Engler and Prantl's *Natürlichen Pflanzenfamilien* (1896), with some minor modifications. In the synopsis of *Bacterium* and *Bacillus*, coloration by Gram's method is used as an important differential test. This might be open to criticism, for variation of the Gram staining reaction within a so-called group is well known. It was brought out in a recent study of *B. pyocyaneus* by Roger C. Perkins as follows: "In reactions of the various organisms to Gram's stain, my results did not coincide with those of Jordan and Ruzicka, who note complete decolorization in every case. Of ten varieties studied in this present series, seven decolorized uniformly and regularly when treated by this method, but three retained the color at every trial."³ On the other hand, Chester has given a subordinate place to formation of gas in the different sugar bouillons, a comparatively constant reaction.

In the section devoted to the terminology of descriptive bacteriology, the author has arranged and illustrated an excellent series of simple terms, capable of expressing definitely in one word the meaning of several sentences of the old style verbose and figurative cultural description. These terms are interesting additions to the bacteriological vocabulary. The criticism of species nomenclature is a point well taken, although no adequate suggestion is made as to how names of forms so closely related as the various kinds of

²CHESTER, FREDERICK D., *A manual of determinative bacteriology*. 8vo, pp. vi + 401, figs. 13. New York: The Macmillan Co. 1901. \$2.60.

³Jour. Med. Research 281. 1901.

fluorescent bacteria could be made indicative of that fact and yet avoid the trinomial term. What faults may be found in the book, however, are of minor importance in comparison with its value as a reference book, and a supplement to the text-book of every student in a bacteriological laboratory.—MARY HEFFERAN.

The flora of Alabama.⁴

DR. CHARLES MOHR has left behind him a most substantial monument. The bulky volume before us contains the botanical records of "forty years of sojourn and wanderings" through the state of Alabama. It may be added that the "wanderings" were by no means aimless, but were those of a keen and tireless observer. Such a mass of observations by a single man is the possession of no other state. It is a pleasure to note that the author was permitted to complete the organization of his notes of a lifetime into permanent and usable form.

The book presents the patient study of a great and interesting area, not by the perfunctory cataloguing of species collected, but by the discussion of the broad biological features which have determined the flora and its distribution. The author evidently fully appreciated the newer aspects of the problems of floras, and has presented to us, in terms of Merriam's life zones and Warming's plant associations, the general ecologic and floristic features of Alabama.

The general discussion occupies 137 pages, and is full of material for the student of phytogeography. After some preliminary historical material, in which the work of such pioneers as Bartram, Buckley, Gates, Peters, Beaumont, and Nevius, are fully noted, the general physiographic features of the state are presented under topography and geology, river systems, and climate. Then follows an account of the general principles of plant distribution, the significance of life zones and of plant associations and formations being explained. These principles are then applied to the flora of Alabama, which is presented in its general character and distribution.

The ecologic relations are considered under the following titles: forest flora, open land or campestrian flora, water and swamp flora, organotopic flora (epiphytic, saprophytic, parasitic, and insectivorous plants), and introduced plants and their influence upon native plant associations. The distribution falls naturally under the two general heads of the Carolinian and Louisianian areas; the former including the mountain region, the table-lands of the Warrior and Coosa basins, the region of the Tennessee river valley, and the region of the lower hill country; the latter including the region of

⁴MOHR, CHARLES: Plant life of Alabama. An account of the distribution, modes of association, and adaptations of the flora of Alabama, together with a systematic catalogue of the plants growing in the state. Contrib. U. S. Nat. Herb. 6: 1-921. pls. 1-13. 31 Jy. 1901.